

Determining the Legal Relations of Gemological Objects of Natural Origin

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Abstract

Determining the essence, correlation and types of objects of law and objects of legal relations is considered one of the most debatable issues in the theory of law, having significant theoretical and practical significance. This article analyzes the constitutional, subsoil and gemological legislation regulating relations arising out from material gemological objects. The objective of this study is to understand intersectoral aspects of gemstones of natural origin, having been considered as an object of legal relations. The methodology comprised of dialectical, comparative legal, formal legal (dogmatic), formal logical, critical legal, systemic-structural and systemic-functional methods. This is the first time when geological-legal science has proposed the foundation of a dualistic theory addressing the multi-level structure of objects of gemological legal relations. It consists of the symbiosis of gemologically-significant actions and goods. The article also proposes general legal definition (an object of gemological law, an object of legal regulation of gemological law, an object of gemological legal relations), and special-legal definition (amber-bearing subsoil, natural gemstones) aimed at developing and improving the national gemological law.

Keywords

Gemological legal relations; Gemstones; Intersectoral status; Gemologically-significant goods; Gemologically-significant actions

Introduction

The current Law of Ukraine “On State Regulation of Extraction, Production and Use of Precious Metals and Gemstones and Control of Operations with Them” (1997) (hereinafter Law on PM&GS) - the legal basis having principles of State regulation of extraction, production, use, and storage of the precious metals and gemstones (PM&GS) and control of its operations - contains no provision that defines the gemological objects in a legal relationship. In fact, as is known, there cannot be a legal relation without an object, and, therefore, each legal gemological relation has to have an object. Thus, researching this, in particular, is very relevant today, since the absence of a perception about the legal nature as an object is an impediment to determining the gemological legal relationship in general, making it impossible to reveal fully the given complex of legal relations, and, hence, creating obstacles to conceive the methods of regulating gemological objects.

Unlike the Law on PM&GS, some laws on natural resources indicate the types of objects similar to the mineral resources. For example, objects within the land relations, as stipulated in Part 3, Art. 2 of the Land Code of Ukraine, 2001, are: 1) lands within the borders of the territory of Ukraine; 2) plots of land; 3) rights in land, including land shares. The Mining Law of Ukraine, 1999, Art. 4 defines the objects of mining relations as:

- 1) geological survey of underground resources;
- 2) designing projects, construction (reconstruction, technical re-equipment), exploitation, liquidation or conservation of mining enterprises;
- 3) organization of safety solutions to prevent accidents at mining enterprises;
- 4) labor protection, provision of safety and healthcare to people in highly dangerous conditions.

However, in this sense of resource relations, it is evident that, in the first example, the objects are considered to be certain material and intangible goods, whereas, in the second example, production and allied activities are related services. Therefore, in relation to the gemological objects, there are varied perceptions about the nature of gemological objects. Moreover, inter-sphere nature of legal relations of gemological objects makes it harder to determine the integrity of the law on gemological objects.

It is also an important scientific task towards improving gemological law in Ukrainian contexts. Thus, this article aims at determining the system of gemological legal relations, determining its types and levels, and interdisciplinary connectedness. The following objectives can be set to construct this article:

- 1) to compare the notions “object of gemological law” and “object of gemological legal relations”;
- 2) to analyze different types of contemporary material objects of gemological legal relations;
- 3) to present a dualistic theory of the pluralistic structure of gemological legal relations; and
- 4) to determine the constitutional-, subsoil- and gemological-legal status of material gemological objects.

Methodology

The methodology of the research comprises general scientific and special methods. In particular, as the main methods of cognition used in legal practice, methods of deductive and inductive reasoning were employed along with the analysis and synthesis, abstraction and generalization. Deductive reasoning works from the more general to the more specific, inductive reasoning works the other way, moving from specific observations to broader generalizations and theories. Special scientific methods of research included the analysis of the recent related publications, legal facts, gemological objects, actions with them, and opinions of other authors. Review of literature and objective analysis of existing laws are the additional methods used in conducting this research.

The use of such methods like dialectical allowed to reveal the inter-sphere status of material objects of gemological legal relations of natural origin. The dialectical method of scientific cognition allowed the analysis of the current national legislation that regulates the constitutional, subsoil-related and gemological relationships regarding gemological objects. Controversial scientific positions on revealing the theoretical, practical notions and its relationships do not always correspond to the current international standards. By using the comparative-legal method, an analysis of types of current classification of material objects of gemological legal relations was performed. The formal-legal (dogmatic) method allowed to trace the relationships between the internal content and external expression (form) of State-legal phenomena and institutions. As a result, a dualistic theory of pluralistic structure was presented containing the objects of gemological legal relations.

Review of Literature

Issues of gemological relations fall within the sphere not popular among domestic legal scholars. For and by its complexity and volume, it is one of the most difficult areas for developing a theoretical framework. However, most notable documents, such as dissertations and position papers are analysed in the subsequent paragraphs.

For the first time in the science of economic law in Ukraine, Efremova (2009) proved that the market of goods made of PM&GS – also as a complex object of legal regulation – is composed of varied segments, e.g., the raw materials, production of goods, sales, secondary market (commission trade, disposal and recycling). All these segments have legal meaning and are separate objects for industrial legal policy. To provide economic regulation in this particular sphere, it would be logical to consider it belonging to autonomous main sectors: 1) market of jewelry, and 2) market of industrial goods. This author emphasized only certain activity-related objects, while excluding the material types from the research framework.

For the first time, Malichenko (2012) defined the contemporary administrative legal status of PM&GS in Ukraine, based on the analysis of economic, political, organizational, administrative, and scientific components. The author highlighted that the process of administrative-legal regulation in the sphere of PM&GS in Ukraine was underway. Such conclusion made 15 years after the Law on PM&GS looks debatable because it is not simpler to prove the obvious. However, direct cognition requires no evidence and is the basis for proving indirect cognition.

Similarly, Semenyuk (2015) states that the complex nature of the regulations concerning PM&GS made it necessary to review the contemporary theoretical and methodological developments in context of constitutional, administrative, informational, financial and economic laws. On the other hand, studies that expose the shortcomings of the state regulation of the development of the jewelry segment in Ukraine touch upon only the quality of jewelry, taxation, marking and sample control.

Romanov (2017) has improved the definitions of administrative and legal provisions related to PM&GS as a complex of legislative, law-enforcing and control-monitoring measures. Such measures can be carried out using the norms embodied in administrative law, followed by the usage of public administration dealing with ordering, regulating, protecting, implementing and developing the public relations that are needed during the extraction, production, use, operation, and enforcement of rules, norms and standards. However, such content of administrative and legal provisions of PM&GS fail to incorporate adequately the gemological and related affairs, especially those that are regulated by the Law on PM&GS.

In his dissertational research, Dikhtyarenko (2019) tried to improve the knowledge about legal regulation on PM&GS, especially gemstones of organogenic formation (hereinafter known as GSOF) and semi-precious stones (hereinafter – SPS), although his focus was on the objects of stone material. However, such

an interpretation is not coherent with the provisions in the Civil Code of Ukraine (2003), Art. 177, 179 encompassing: a) items having bearing on civil rights; b) items of material world having relation with civil rights and obligations.

The legal basics in public administration sphere concerning extraction, production and use of PM&GS was further developed by the research of Titova (2021). One of the regulated sectors was considered to be the extraction of “precious mineral resources”, including geological prospecting of amber-bearing subsoil and industrial mining of amber deposits. Researchers did not agree with such a proposition for several reasons. First of all, the domestic legislation does not use and define the term “precious mineral resources”. Secondly, it is incorrect to consider amber as gemstones (hereinafter – GS) only. Thirdly, extraction of mineral resources, according to Art. 14 of the Subsoil Code of Ukraine (1994) (hereinafter – SCU) and geological prospecting of subsoil, is different sequential types of using subsoil having different object-subject contents of their relations. Finally, as noticed from previous publications, the authors have, for the first time in the geological-legal studies, proposed formulating the system of gemological law based on principles of differentiation (Kirin, Baranov and Koziakov, 2021).

At the same time, in this paper, the existing scientific amendments and positions of the legal acts are reviewed and evaluated, which are directly or indirectly related to gemstones as objects of gemological legal relations. It is summarized that, currently, the literature and legal sources provide no description of the relevant scientific problems that occur when legal status of gemological objects are determined. However, research on such issues is fundamental for classifying legal relations, differentiation and structuring of gemological law.

Results and Discussion

Comparison of Notions “object of gemological law” and “object of gemological legal relations”

The questions of determining the essence, relationships and types of objects of law and objects of legal relations are considered debatable, while having significant theoretical and practical significance. Studying these aspects is fundamental to classify legal relations, and to structurize legal sphere and legal institutions. Analysis of the object of law and legal regulations reveals absence of unity in approaches to determining notions and essence, which can be expressed in the following theories:

- 1) an object of law is equivalent to an object of legal relations;
- 2) an object of law is equivalent to legal rights;
- 3) an object of law is equivalent to object of rights;
- 4) an object of law is not equivalent to an object of legal relations.

Further, drawing from the fourth preposition, an understanding needs to be developed to establish a connect between law and social relations at which the legal regulations are directed, and/or which need to be regulated using legal norms. Therefore, the gemological law should be considered the gemological relations that could be a subject to legal regulation. In turn, as the legal regulation of gemological law, the complex of qualitatively homogenous relations shall be regulated by the legal norms. Therefore, gemological law has its individual basis of legal regulation, which determines its independence, individuality, peculiarity, difference from other complex of legal norms designed to regulate the qualitatively homogenous social relations. At the same time, being a complex sphere of law, gemological law unites – other than its own – gemologically-significant norms of fundamental and practical spheres of law.

Instead, the legal relations of materials and intangible goods, which are obtained, transferred or used, require obligations of participants involved in legal relations, particularly: material world, items and values, non-property goods, services; and spiritual creativity (Petrishin *et al.*, 2020). Therefore, the difference between

object of law and object of legal relationships is that the first has a general and static character being considered as “integrity” and “possible”, while the other – always concrete and dynamic – is considered as a “part” or “actual” being. Thus, the notion “object of law” is broader than “object of legal relations”.

As for the notion “object of gemological legal relations”, it is to consider the gemologically-significant behavior and/or gemologically-significant goods that make the subjects engaged in legal relations, that exercise legal rights, and that fulfill legal duties. Usually, gemologically-significant goods as the objects of legal relations are considered a reflection of the gemologically-significant behavior of subjects, i.e., material content of legal relations. Simultaneously, the latter should be considered as a legal behavior i.e., social action or inaction of a person: a) having a consciously willing nature; b) being regulated by the law; c) entailing legal consequences. Legally neutral behavior cannot be considered as legal.

In case, gemologically-significant goods are separated from the behavior of subjects, then such objects - and eventually the person’s willful activities - can obtain individual regulation. That is, practically, when solving legal cases dealing with legal relations with a distinguished object, one should carry out not only an analysis of object content, but also of the norms that regulate its legal regime.

Types of Material Objects of Gemological Legal Relations

Though the Law on PM&GS does not directly define the gemological relations, it contains a list of material goods being proposed to be presented as the following gemological-legal classification:

- 1) Gemstone (GS) by origin:
 - 1.1) natural minerals:
 - 1.1.1) natural minerals in raw materials;
 - 1.1.2) natural minerals in unprocessed form;
 - 1.1.3) natural minerals in processed form (goods).
 - 1.2) artificial (synthetic) minerals:
 - 1.2.1) artificial (synthetic) minerals in raw material;
 - 1.2.2) artificial (synthetic) minerals in unprocessed form;
 - 1.2.3) artificial (synthetic) minerals in unprocessed form (goods).
- 2) Gemstones by value (grade):
 - 2.1) first grade;
 - 2.2) second grade;
 - 2.3) third grade;
 - 2.4) fourth grade.
- 3) Gemstone by formation:
 - 3.1) pearls of organogenic (biogenic) origin;
 - 3.1.1) pearls in raw material;
 - 3.1.2) pearls in unprocessed appearance;
 - 3.1.3) pearls in processed appearance.
 - 3.2) amber of organogenic (biogenic) origin:
 - 3.2.1) amber in raw material;
 - 3.2.2) amber in unprocessed appearance;
 - 3.2.3) amber in processed appearance.
- 4) Semi-Precious Stones (SPS) by origin:
 - 4.1) natural minerals:
 - 4.1.1) natural minerals in raw material;

- 4.1.2) natural minerals in unprocessed form;
- 4.1.3) natural minerals in processed form (goods).
- 4.2) artificial (synthetic) minerals:
 - 4.2.1) artificial (synthetic) minerals in raw material,
 - 4.2.2) artificial (synthetic) minerals in unprocessed form;
 - 4.2.3) artificial (synthetic) minerals in processed form (goods).
- 5) Semi-Precious Stones (SPS) by formation:
 - 5.1) organogenic formations;
 - 5.1.1) organogenic formations in raw material;
 - 5.1.2) organogenic formations in unprocessed form;
 - 5.1.3) organogenic formations in processed form (goods).
 - 5.2) rocks:
 - 5.2.1) rocks in raw material;
 - 5.2.2) rocks in unprocessed form;
 - 5.2.3) rocks in processed form (goods).
- 6) Semi-Precious Stones (SPS) by value (grade):
 - 6.1) first grade;
 - 6.2) second grade.

Such a presentation of the national classification of GS demonstrates a number of obvious flaws. Therefore, categorizing the “artificial minerals” equal to “synthetic minerals” does not take into account its differences from the natural stones. As a matter of fact, synthetic minerals have natural analogues in accordance with its physical-chemical properties; hence the artificial goods (products) have no natural analogues, as the natural stones do have. Moreover, it can be noted that the “pearls in processed form” also look contradictory. Objectively, gemology makes distinctions between pearls of natural origin (natural, wild) and cultured pearls (grown by human intervention). Its “processing”, in some cases, is only insignificant polishing of superficial defects, drilling some holes or sawing etc.

At the sub-legal level, the general gemological-legal classification was made publically available before the adoption of the Law on PM&GS in 1997 and, currently, after certain insignificant amendments, it divides the natural stones as follows (Government of Ukraine, 1994b): GSs (from first to fourth grade); 2) SPSs (from first to second grade); 3) decorative stones. It should be noted that such a classification, first of all, covers only stones of natural origin. Geological-legal division of semi-precious raw material, classified under the group “other non-ore raw material”, is taken up in the Nation-Wide Program of Development of the Mineral Raw Material Basis of Ukraine for the period until 2030 (Government of Ukraine, 2011a). This group of raw materials includes following traditional Ukrainian stones: 1) amber, topaz, beryl, quartz; 2) reserves of amber, marble, onyx, rhodonite; 3) discovered manifestations of emerald, aquamarine, ruby, sapphire, garnet, amethyst and various jewelry-producing stones. Jewelry-producing stone, in Ukrainian каміння ювелірно-виробне, is used as a synonym for semi-precious stones. The production-used stones, Ukrainian каміння виробне, refers to stones below the category of semi-precious stones, but the features of which have not been determined. A separate group, named “Precious Metals and Diamonds”, is classified as first-grade GS. It is a diamond having been recognized as an important type of raw material belonging to the D category. At the same time, the category “Natural Colored Stones” includes GS, SPS and production-used stones. The production-used stones refer to a large category of stones of lower value, including pagodite, alunite, anorthosite, beresite, volinite, goethite, and many others].

A little different is the classification of stones by Economic-Legal Classifier of Mineral Resources (CMR). The GS (Classifier of Minerals, 2007) contains the class “Metal Free (non-metal) Mineral Resources” and

include the group “Precious Stones and Collectables”, which, in turn, is composed of the following subgroups: 1) jewelry raw material (GS); 2) jewelry-producing raw material (SPS); 3) production-used raw material; 4) precious stones of organogenic formation; 5) collectable precious stones (GS, SPS, production-used stones, stones of organogenic origin, optic and piezoelectric). Similarly, the term “Precious Stones” indicates the stones: 1) GS; 2) SPS; 3) production-used; 4) collectable.

According to mining-legal classification, the class, “Non-Metal Mineral Resources”, among others, contains the following groups (Government of Ukraine, 1994a): 1) jewelry raw material (GS); 2) jewelry-production-used raw material (SPS); 3) production-used raw material; 4) raw material for facing materials (decorative stones). Some of the mineral resources can be used in several ways.

How deposits of mineral resources of national significance would be used is decided by the State Commission of Ukraine on Mineral Resources. The tax-legal differentiation of the objects of personal property distinguishes clearly: 1) natural GS; 2) jewelry with precious metals and/or natural GS. Easily differentiated are also the subjects of the economy (legal persons and physical persons i.e., the entrepreneurs) who carry out extraction, production, and trade of PM&GS, including GSOF (except production, supply, sales of jewelry and household goods of PB&GS, GSOF and SPS) (Arts. 174.1, 291.5.1 of Tax Code of Ukraine, 2010). The gemological objects are determined in forensic legislation are as follows: GS; diamonds; GSOF; SPS; decorative stones and goods made from them; jewelry with incorporated stones; and raw material of pearls, amber, etc. (Government of Ukraine, 2012).

Internationally, the standard classification is CIBJO (2018) (which means in French, Confédération Internationale de la Bijouterie, Joaillerie, Orfèvrerie, des Diamants, Perles et Pierres). It is known as World Jewellery Confederation in short. It is a non-commercial business association that represents the interests of all persons, organizations and companies doing activities related to jewelry products and PM&GS. The book “The Gemstone” (CIBJO, 2018) indicates two categories of materials that are determined by the jewelry sphere:

- 1) natural materials:
 - 1.1) natural GS;
 - 1.2) processed GS.
- 2) artificial products;
 - 2.1) artificial products with (GS) components with GS;
 - 2.2) synthetic stones;
 - 2.3) artificially crystallized products without known natural analogues;
 - 2.4) artificial non-crystallized products.

Within the framework of this standard, materials are qualified as “natural” if they have been completely formed by nature without involvement (participation) of humans (CIBJO, 2018). In this regard, gemologists note that there is a need to step away from the emphasis on differentiation of the stones made in terms of cost value, and they focus simply on their essence-related significance of stone materials. The term “precious stone” would be corresponding and adequate. Legal terms “gemstone” and “semi-precious stone”, used now in the sphere of normative-legal base, should lose the status of legal terms. At the same time, the term “semi-precious stone” should be removed from usage, while the term “gemstone” can be used as a typical trade market notion (Geleta *et al.*, 2017).

Such a position does not seem justified specifically from legal standpoint. First of all, terms “gemstone” and “precious stone” are used in the domestic legislation either in equivalent or absorbing senses. Secondly, the term “precious” is related to trade and money, whereas the term “precious”, when used for stones, corresponds more to the term “gem” that is related to jewelry and means high quality of jewelry. Stones of high quality jewelry are expensive, and, therefore, the terms “gem” and “precious” from the market

standpoint could be considered synonyms; but, according to etymology, they are not synonyms since the first is related to cost and the other to quality (Baranov, Kirin and Shevchenko, 2020). Thirdly, the term “gemstone” is a fundamental notion of gemological law and legislation, and, therefore, depriving it of its status of a legal term is improper.

Instead, the term “semi-precious stone” as a term “gemstones of organogenic formation” is legally neutral, for it is mentioned zero times in the text of the Law on PM&GS independently from the notion “gemstones” i.e., they have absolutely the same legal status. This is evidenced by the provisions of Part 2 of Art. 3 of the Law on PM&GS (1997), according to which, its instructions are relevant for relations in the sphere of state-regulated extraction, production, use, storage and control of operations with GSOF and SPS. Therefore, following the approach utilized in the ‘definition’ related articles of the Law on PM&GS, those kinds of GS should have had corresponding grade groups with amendments and expansions to the notion “gemstone”. However, this approach does not seem optimal, for determining grade (value) groups of GS in the content of the law, which is against the background of fluctuations in the market prices is not practical. Therefore, formulating grade groups of PS is proposed not on a permanent, but rather on a volatile basis, with a possibility of corresponding inter-group migration depending on the book cost of a particular GS. It is proposed that the National Bank of Ukraine should be authorized to appraise and announce the price. At the same time, in Art. 1 of the Law on PM&GS, instead of notions GS, GSOF and SPS, it is proposed to introduce the notions “artificial gemstone” and “natural gemstones”. The latter would mean natural mineral groups of organic and inorganic origin in unprocessed appearance, which are further classified into jewelry (jewelry-production-used) raw material falling in the list of mineral resources of national significance, and approved by the Cabinet of Ministers of Ukraine at the suggestion of the central body of executive power forming State policy concerning protection of the natural environment.

Dualistic Theory of Pluralistic Structure of Gemological Legal Relations

Determining the object content of a legal relation as its compulsory element is one of the fundamental tasks for any legal formation. The groundwork for the formation of a stable normative-legal basis is to define the purposes that create conditions for the emergence of the legal relations. In the modern theory of law, four main theories of object of legal relations have been developed:

- 1) Monistic activity – It recognizes the object of legal relations as a single “object” expressed by actions of subjects, its behaviors (theory of action object);
- 2) Monistic substance – It means that the objects of any legal relations are mostly the substances;
- 3) Dualistic – It recognizes the elements of legal relations as two objects – actions of the person and objects to which the actions are applied (items);
- 4) Pluralistic – It is related to the objects of the relations. Numerous items are recognized depending on the form of relations. It can be material objects, objects of spiritual creativity, personal belongings, services, rights, actions and behavior of people, results of their actions, will and conscience.

The legal relations in general and, in gemological contexts, in particular, are characterized by quantitative object variability. Therefore, legal relation may be presented by objects as 1) necessary behavior of an obligated person; 2) material or intangible good; 3) required behavior of obligated person regarding material or intangible good. This particular position allows one to take into account, simultaneously, the significance of a certain good as an object of legal relations and its ability to influence the behaviors of subjects. That is, as mentioned above, object of gemological legal relations may be gemologically-significant behavior and/or gemologically-significant goods. At the same time, each group of goods-related objects or action objects can be divided into beings that have a facultative character.

Moving from knowledge of a single entity to knowledge of the special and general items, along with

cognition of their interrelation, is methodologically significant for understanding the pluralistic structure of objects of gemological legal relations. In legal practice, those philosophical categories are hierarchically differentiated by the elements into the following categories: general, group-classified, and direct. Therefore, if gemologically-significant goods are considered as a general goods-related object for all types of goods, that material object of natural and artificial (synthetic) origins shall be considered in unprocessed and processed forms (goods). Its external group-classified category for a chosen group of objects would be presented by different types, e.g.: a) material objects of natural origin (natural) in unprocessed form; b) material objects of natural origin (natural) in processed form.

The direct category of objects of gemological legal relations is determined by the corresponding law, the norms of which are regulated by particular types of gemological and/or gemologically-significant legal relations, and may be composed of similar internal categories.

Constitutional-Legal Status of Material Objects of Gemological Legal Relations

Before analyzing this issue, it is notable that, in the theory of law and most doctrinal and legal formulations, the notion “legal status” is used with regards to the active position of a subject that carries out any activity. At the same time, the legislation also contains norms in which the legal status is determined for an object, for example, land plot, real estate, territory, etc. Therefore, in context of GS, legal status here shall be considered to be its position in the system of legal relations as established by the respective sphere of the law or as derived from the normative-legal acts, for example – possibility of carrying out official agreements regarding the object, absence or presence of limitations, legality of all previous agreements, actions, etc.

Therefore, Art. 13 of the Constitution of Ukraine (Constitution, 1996) allows to state that the subsoil existing in the territory of Ukraine and its continental shelf or its exclusive (marine) economic zone is the object of right to property of the Ukrainian people. That is, the latter, according to the stipulations of Art.1 of the Subsoil Code of Ukraine - SCU (1994), is the part of the Earth’s crust having the following dimensional borders: a) located under the land surface and bed of water bodies; b) embedded at the depths available for geological survey and exploration. Therefore, all the resources of the Earth’s crust, namely the mineral-raw material, geoenergetic, spatial-basic, etc. are in natural (geogenic) relationship with it or characterize its initial or altered condition and properties. The logic of such a position is confirmed by the order of the Part 1. Art. 10 of the Law on PM&GS, according to which PM&GS, GSOF and SPS accumulated in the subsoil are the objects of right to property of the People of Ukraine (Art.10 Law on PM&GS, 1997).

The right to property in minerals, metals or mineral resources, in general, is determined only after being allowed by the State, following all legally established conditions for its extraction from subsoil. In other words, the minerals and mineral resources may be used in business only after its separation from the subsoil under strict legal, legitimate and safe mining and extraction (Kozyakov, 2009). The mechanism of the right to property for GS, GSOF and SPS, as well as other mineral-raw material resources, is explained into two principally different and legally-significant conditions: 1) when the minerals are naturally embedded, immobile, and in geogenic relationship with subsoil (*in situ* – undisplaced natural materials); 2) when the minerals are detached from the place of natural embedding or separated from the subsoil as a result of technogenic impact and converted to a mobile state (*ex situ* – displaced natural materials). Such minerals become the property subjects of extraction, if not determined otherwise by a special permission for using subsoil. State agreements are made for those subjects; or international agreements are made by Ukraine, ratified by the Ukrainian Parliament, in order to realize the value of the minerals.

For GS, transition of the right to property from the People of Ukraine to subsoil user occurs at its separation from the structure of rocks and it should not be connected with its spatial location, for example – transfer to the Earth’s surface. For example, under open mining method, the stones come on to the surface, while during

the underground method of mining, the stones are not always elevated to the surface. The notion “mining of GS and SPS” used in the Law on PM&GS indicates its extraction from rocks by all means available (Art. 1, Law on PM&GS, 1997). Such a definition could hardly be considered successful from either technical or legal perspectives.

First of all, in the terms “mining”, “excavation” and “extraction”, “extracting” can be considered as close and equivalent, its content in the given definition is completely undefined. However, extraction – as one of the kinds of using subsoil, as implied by the Art. 14 SCU (1994) – is a legally significant action of a person (subsoil user), oriented at separation of mineral resources from subsoil. Because those actions cause relations with the right to property in extracted mineral resources, the legislation should be clear about the contents of such actions, since the term “by all means available” can equally be considered as legal and illegal.

Secondly, it is necessary to have a perception of the subject and object of extraction. The latter, for example, can be separated from the subsoil in pure form or together with other mineral resources and components, and also overburden and containing rocks. Furthermore, legal regulation is needed for designation of legal statuses: a) “mineral resource at place of embedding”; b) “mineral resources extracted”, since the status is related to the form of its ownership. Likewise, it is important to predict this circumstance for each type of mineral resource depending on its natural physical condition – solid, liquid, gaseous – and also the condition of the site of deposits from where the mineral resources are being extracted – natural or technogenic.

Thirdly, while comparing the notion “SPS” with the notion “extraction of GS and SPS”, one of the variants of its explanation is the tautological word combination, such as “extraction of rocks from rocks”, which indicates insufficient terminological correlation between those two notions. As a benchmark of a stable definition of “extraction of mineral resources”, the latest similar notions can be used. This notion has been started to be used in the tax legislation (Government of Ukraine, 2021) implying: a) types of technological operations; b) object from which it is extracted; c) object that is being extracted; d) types of special works. Therefore, constitutional regulation is drawn in relation to objects of the right to property of the Ukrainian people, which is the subsoil – part of the Earth’s crust spatially limited by the territory of Ukraine, its continental shelf, or exclusive (marine) economic zone embedded at the depths that are available for geological survey and exploration. Group-classified objects are proposed to be considered the reserve resources of the Earth’s crust – mineral-raw material, geoenergetic spatial-basic, etc., which are in natural (geogenomic) relationship with it or characterize its initial or altered condition and properties.

Subsoil-Legal Status of Material Objects of Gemological Legal Relations

Art. 4, SCU (1994), even before the above-mentioned constitutional norm, claimed subsoil to be the exclusive property of the People of Ukraine. This object may be given for use, and agreements or actions in direct or hidden form are violating the right to property are invalid. However, if in constitutional-legal status, material objects of gemological legal relations were considered as objects of right to property, the subsoil-legal regulation of those objects is carried out mostly as objects of law by subsoil users.

Analysis of the stipulations of the current legislation on subsoil allows to propose a three-level system of material objects of gemological legal relations of the following kind: “GS-bearing subsoil”, “deposits of GS”, and “jewelry (jewelry-production-used) raw material”. Similar object content derives from orders that have recently appeared in the domestic legislation regarding amber, currently the most competitive colored stone of Ukraine. Therefore, the general object of gemological-amber relations, in relation to which the subsoil-legal regulation is being performed, is amber-bearing subsoil. The latter has no legal definition in the legislation, and, thus, it is proposed to be considered the part of the subsoil containing accumulations of amber ore, accumulated under the land surface, bed of water bodies or on the Earth’s surface, outlined in

accordance with the conditions regarding the content, quality and quantity of amber, conditions of embedding and mining.

As with amber-bearing subsoil, as an object of right to use the subsoil, the current SCU (1994) regulates the following types of legal relations:

- 1) type of use of subsoil (Art. 14);
- 2) period of use of subsoil (Art. 15);
- 3) assessment of impact on the environment (Art. 15-1);
- 4) area of the subsoil site (Art. 16);
- 5) use of subsoil without providing mine concession (Art. 17);
- 6) initial selling price at the auction sanctioned by special permit (Art. 34);
- 7) use on disturbed land plots (Art. 51).

It is proposed to consider GS deposits as a group-classified object of the subsoil-legal segment of gemological relations. The notions “deposits of precious stones” and “mineral resource deposits” (Art. 5, 26 of SCU, 1994), and also the “deposits of amber” (Government of Ukraine, 2003b), are defined in the legislation on subsoil. At the same time, deposits of GS are mentioned in the Art. 6, Law on PM&GS in relation to the formation, content and development of the State reserves of explored deposits of PM&GS. The latter does not belong to material objects of gemological legal relations, though it is directly related to its informational block. Similarly, the legislation does not specify such a type of object as deposit of amber – groups according to geological-industrial types, division according to size of reserves and complexity of geological structure, requirements to geological surveys (Government of Ukraine, 2003b). Finally, at the direct level, the SCU (1994) classifies GS as objects of right to use the subsoil to one of types of mineral resources of the nation-wide level – raw material of jewelry and jewelry-production spheres.

Gemological-Legal Status of Material Objects of Gemological Legal Relations

The current law on PM&GS, by unfolding the notion “gemstone”, which is proposed to consider the general material object of gemological legal relations, distinguishes following features of it:

- 1) origin:
 - 1.1) natural minerals;
 - 1.2) artificial (synthetic) minerals.
- 2) condition:
 - 2.1) minerals in raw material,
 - 2.2) minerals in unprocessed form;
 - 2.3) minerals in processed form (goods) with its further grading according to its value (cost).

Moreover, separate groups of GSOF are also distinguished as pearls and amber. SPS are distinguished as minerals, organogenic formations and rocks. However, the groups, as mentioned above have no legal status different from GS. Moreover, “amber ore” in the legislation is considered as a natural mineral formation (Government of Ukraine, 2003b). Furthermore, CIBJO-2018 classification implies that the jewelry industry recognizes two categories of materials (CIBJO, 2018): 1) natural materials; 2) artificial products. Yet, natural material can be classified as “natural” only if such stones (material) have been completely formed by nature without human interaction (impact). This group has internal differentiation: 1) unprocessed GS; 2) processed GS.

Therefore, in respect of chosen object of studies and drawing from the content of the national gemological legislation, as class objects of gemological legal relations, GS of natural origins – minerals, organogenic formations and rocks – should be suggested, such as: 1) in unprocessed form; 2) in processed form (goods). That is, the determining feature of the group-classified level of objects of gemological legal relations is the

degree of involvement of humans in the initial condition of GS. This specific approach to its legal differentiation corresponds to the above-mentioned international standard. Notably, the national division of GS has a condition indicated as “raw material” and “unprocessed appearance”, which are not defined only in the legislation but also at the sub-legal level. Likewise, this differentiation entails no legal consequences since GS in raw material is different from GS in unprocessed form only by the fact that latter is usually raw material having been only cleaned (washed) from parent rock, sand, clay, etc. Sometimes, it may have come from open “windows” to look at defects, pre-sorted, sorted, divided, or pyrotechnical and radiation control.

Therefore, unprocessed GS should be understood as “product of mining enterprise” – mineral raw material extracted by mining enterprises and correspond to the defined standards (Government of Ukraine, 2003b). Finally, the direct category of material objects of gemological legal relations of natural origin is proposed to be presented as follows:

- 1) GS as object in relation to which the right to property emerges; including jewelry and household goods with GS;
- 2) GS as object of storage and reserves, bought and given (sold) in established order;
- 3) GS as an object in relation to which there are actions associated with content or physical condition in any substances or materials during its extraction, production and use;
- 4) GS as object or component of goods and materials that are imported to Ukraine and are exported from Ukraine;
- 5) GS as object of trade;
- 6) GS as object that is preserved and exhibited;
- 7) GS as object in secondary resources;
- 8) GS as object in recuperated form;
- 9) GS as object of treasure;
- 10) GS as object in wastes and scrap;
- 11) GS as object of State Fund of PM&GS of Ukraine;
- 12) GS as object of the Historical Fund of PM&GS of Ukraine;
- 13) GS as object of regulation and management;
- 14) GS as object of expertise and expert appraisal;
- 15) GS as object of account;
- 16) GS as object of control;
- 17) GS as object of protection;
- 18) GS as an object of crime.

Conclusion and Recommendations

The analysis based on the literature, legal documents, and gemological legal relations enables to draw formulate the following conclusions:

1. Following legal definitions are proposed:

- “object of gemological law” – gemological relations that can be an object of legal regulation and require such a regulation;
- “object of legal regulation of gemological law” is a complex of same-kind of social relations that are regulated by legal norms;
- “object of gemological legal relations” is gemologically-significant behavior and/or gemologically-significant goods, because of which subjects become involved in legal relations, and realise its subject rights having its legal obligations.

The difference between the object of gemological law and the object of gemological legal relations is established. The former is broader having a general statistical character and is considered as “integral” and

“possible”, while the latter is always concrete or dynamic, and is considered as “part” and “valid”. Arguments that gemological law has its specific object of legal regulation is presented to determine its individuality, specification, peculiarity. Simultaneously, being a complex sphere of law, gemological law combines – other than its own – gemologically-significant norms of fundamental and special domains of law.

2. It is proved that gemologically-significant goods are usually considered objects of legal relations because of gemologically-significant behavior (actions) of subjects. In cases when gemologically-significant goods are separated from the behavior of subjects, then such objects can attain individual or separate regulation in legal norms as corresponding legal regime, which would reflect the peculiarities of those objects and influence on the content of legal rights and legal obligations.

3. Contemporary classification of material objects of gemological legal relations is determined. It is present in normative-legal acts of gemological, geological, mining, economic, tax, forensic and other types of legislation, apart from international standards. The notions such as “gemstones”, “gemstones of organogenic formation”, “precious stones of organogenic formation”, “natural materials”, “precious stone raw material”, “jewelry raw material”, “natural colored stones”, “jewelry-production-used stones”, “semi-precious stones”, “jewelry-making raw material”, “natural minerals”, “artificial (synthetic) minerals”, “artificial products”, “decorative stones”, “raw material for production”, “raw material for facing materials”, “raw pearls”, “raw amber”, “collectable stones”, etc., indicate not only its terminological inconsistencies, but also an absence of a systemic approach to determining fundamental criteria of legal classification and differentiation.

4. The basics of a dualistic theory is proposed to determine three-level structure of objects of gemological legal relations, which implies that objects of gemological legal relations, depending on its content, can be: a) gemologically significant behavior; b) gemologically significant goods; c) gemologically significant behavior and gemologically significant goods. At the same time, each group of goods-related objects or action-related objects can be divided into general, group-classified and direct categories having a facultative character in certain legal formations.

5. Specifics of the mechanism of right to property is substantiated in case of precious stones. Stones are differentiated into two principally different and legally significant conditions. The natural minerals, organogenic formations and rocks: a) are in the conditions of natural embedding, are immobile, and have a geogenic relationship with the subsoil (*in situ*) and are objects of right to property belonging to the People of Ukraine; b) have been detached from the place of natural embedding and separated from the subsoil as a result of technogenic impact, have been made mobile (*ex situ*) and are property of subjects of mining. If not permitted by a special permission for using subsoil, government procurement contracts are made with participation of subjects, or the international agreements of Ukraine are ratified by the Ukrainian Parliament.

6. Formation a definition of “extraction of mineral resources” needs to take into account its legally significant elements, i.e.: a) recognition of extraction as a number of actions of a person (subsoil user) aimed at separation of mineral resources from the subsoil; b) emergence of relations of right to property in extracted mineral resources; c) determining the object from which the extraction is being carried out and object that is being extracted; d) division of legal statuses “mineral resource at place of embedding” and “extracted mineral resources”; d) determining the transition from one condition to other, and, therefore, the form of property for each type of mineral resource depends on its natural physical condition – solid, liquid, gaseous.

7. It is also determined that constitutional-legal regulation at a general level is carried out in relation to an object of right to property of the Ukrainian people, which is the subsoil – part of the Earth’s crust having limits within the borders of the territory of Ukraine, its continental shelf, exclusive (marine) economic zone. A three-level system of material objects of gemological legal relations is proposed, including: “GS-bearing

subsoil”, “deposits of GS”, and “jewelry (jewelry-production-used) raw material”, which derive from orders of the domestic legislation on subsoil in relation to amber – the most competitive Ukrainian colored stone.

8. The term “amber-bearing subsoil” is proposed as a part of the subsoil containing accumulations of amber ore, accumulated under the land surface, bed of water bodies or on the Earth’s surface. It is outlined in respect to the content, quality and amount of amber, conditions of embedding and exploration. Similarly, “natural gemstones” is proposed to stand for natural mineral formations of organic and inorganic origins in unprocessed and processed forms, which are classified into jewelry (jewelry-production-used) raw material in the list of mineral resources of nation-wide significance, as approved by the Cabinet of Ministers of Ukraine.

9. Removing the grading differentiation is suggested from the main gemological terms and notions by transferring it to sub-legal level, with the formation of grade (value) groups of GS on volatile basis with a possibility of corresponding migration on the bases of book costs of concrete stones, the powers to appraise, and announcing its prices as per the decision of the National Bank of Ukraine.

10. The content of material objects of gemological legal relations of natural origin are as follows:

- a) general level – GS of natural origin;
- b) group-classified level – GS of natural origin
- c) class level – GS of natural origin in unprocessed and processed appearance (goods).

Relevant directions of further research for objects of gemological legal relations include determining the mining, geological, economic, financial, customs, tax, administrative and criminal aspects, with a consideration of material objects of artificial and synthetic origins, including the objects having historical, museum, scientific, artistic or other cultural values.

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Authors' Contributions (in accordance with ICMJE criteria for authorship)

Contribution	Author 1	Author 2	Author 3
Conceived and designed the research or analysis	Yes	Yes	Yes
Collected the data	Yes	Yes	Yes
Contributed to data analysis & interpretation	Yes	Yes	Yes
Wrote the article/paper	Yes	Yes	Yes
Critical revision of the article/paper	Yes	Yes	Yes
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